

CLAIMS:

- 1) A method of facilitating interaction between a user and a computer system using a product item having an interface surface, the interface surface having disposed thereon or therein coded data including a plurality of coded data portions, each coded data portion being indicative of an identity of the product item, the interaction being mediated by a sensing device, wherein the method includes:
  - (a) associating the sensing device with the user;
  - (b) in the sensing device:
    - (i) sensing at least one coded data portion when the sensing device is placed in an operative position relative to the interface surface; and
    - (ii) generating, using at least some of the sensed coded data, indicating data indicative of the identity of the product item and an identity of the sensing device; and,
    - (iii) transferring the indicating data to a computer system;
  - (c) in the computer system:
    - (i) receiving the indicating data;
    - (ii) generating, using the received indicating data:
      - (1) product identity data indicative of the identity of the product item;
      - (2) sensing device identity data indicative of the identity of the sensing device; and,
    - (d) dissociating the sensing device and the user.
- 2) The method of claim 1, wherein the method includes performing at least one of associating and dissociating the sensing device and the user using at least one of:
  - (a) the sensing device; and
  - (b) the computer system.
- 3) The method of claim 1, wherein the method includes, in the computer system:
  - (a) receiving indicating data from the sensing device; and,
  - (b) generating, using the received indicating data:
    - (i) product identity data indicative of the identity of the product item; .
    - (ii) sensing device identity data indicative of the identity of the sensing device; and,
  - (c) facilitating the interaction using the product identity data and the sensing device identity data.
- 4) The method of claim 3, wherein the method includes, in the computer system, using the indicating data, adding an indication of the product item to a product item list.
- 5) The method of claim 4, wherein the method includes, in the computer system, and in response to dissociation, providing the product item list to the user.
- 6) The method of claim 1, wherein the method includes, in the computer system:
  - (a) receiving user identity data indicative of an identity of the user;

- (b) determining, using the indicating data, sensing device identity data indicative of the identity of the sensing device; and,
  - (c) using the sensing device identity data and the user identity data to associate the sensing device with the user.
- 5 7) The method of claim 1, wherein the user is provided with an identity card, the identity card having disposed thereon or therein coded data having a plurality of card coded data portions, each card coded data portion being indicative of an identity of the user, and wherein method includes, in the sensing device:
  - 10 (a) sensing at least one card coded data portion when the sensing device is placed in an operative position relative to the identity card; and
  - (b) generating, using the at least one sensed card coded data portion, indicating data indicative of the identity of the user and the identity of the sensing device; and,
  - (c) transferring the indicating data to the computer system, the computer system being responsive to the indicating data to associate the sensing device with the user.
- 15 8) The method of claim 7, wherein the method includes providing the identity card to the user during an interaction process.
- 9) The method of claim 8, wherein the method includes:
  - (a) determining details of the user;
  - (b) defining, using the user details, card coded data indicative of the user's identity; and,
  - 20 (c) printing the identity card in accordance with the determined card coded data.
- 10) The method of claim 1, wherein the method includes, in the computer system:
  - (a) determining, using the received indicating data, product information; and,
  - (b) transferring the product information to the sensing device, the sensing device being responsive to the product information to display the product information to the user.
- 25 11) The method of claim 1, wherein each coded data portion is indicative of a respective position, and wherein the method includes, generating in the sensing device and using the sensed coded data portion, indicating data indicative of at least one of:
  - (a) a position of the sensed coded data;
  - (b) a position of the sensing device relative to the interface surface;
  - 30 (c) an orientation of the sensed coded data; and,
  - (d) an orientation of the sensing device relative to the interface surface.
- 12) The method of claim 11, wherein the method includes, in the computer system:
  - (a) receiving the indicating data;
  - (b) generating, using the received indicating data:
    - 35 (i) position data indicative of at least one of:
      - (1) the position of the sensed coded data;

- (2) the position of the sensing device relative to the interface surface;
  - (3) the orientation of the sensed coded data; and,
  - (4) the orientation of the sensing device relative to the interface surface; and,
  - (ii) identity data indicative of the identity of the product item;
- 5 (c) determining, using the identity data and the position data, an interaction; and,
- (d) facilitating the determined interaction.
- 13) The method of claim 1, wherein the interface surface includes at least one region, including coded data indicative of an identity of the at least one region, and wherein the method includes, in the sensing device:
- 10 (a) sensing the coded data disposed within the at least one region; and,
- (b) generating, using the sensed coded data, indicating data indicative of the region identity.
- 14) The method of claim 13, wherein the method includes, in the computer system:
- (a) receiving the indicating data;
- (b) generating, using the received indicating data, region identity data indicative of the identity
- 15 of the at least one region;
- (c) determining, using the region identity data, an interaction; and,
- (d) causing, using the interaction, provision of the assistance.
- 15) The method of claim 13, wherein the at least one region represents a user interactive element.
- 16) The method of claim 1, wherein the method includes, in the sensing device:
- 20 (a) selecting an interaction mode; and,
- (b) generating indicating data indicative of the selected interaction mode.
- 17) A method of facilitating interaction between a user and a computer system using a product item having an interface surface, the interface surface having disposed thereon or therein coded data including a plurality of coded data portions, each coded data portion being indicative of an
- 25 identity of the product item, the interaction being performed by a sensing device, wherein the method includes:
- (a) associating the sensing device with the user;
- (b) in a computer system:
- (i) receiving indicating data generated by the sensing device in response to sensing at
- 30 least one coded data portion, the indicating data being indicative of the identity of the product item;
- (ii) generating, using the received indicating data:
- (1) product identity data indicative of the identity of the product item;
- (2) sensing device identity data indicative of an identity of the sensing device; and,
- 35 (c) facilitating the interaction using the product identity data and the sensing device identity data.

- 18) The method of claim 17, wherein the method includes performing at least one of associating and dissociating the sensing device and the user using at least one of:
  - (a) the sensing device; and
  - (b) the computer system.
- 5 19) The method of claim 17, wherein the method includes, in the computer system, adding an indication of the product item to a product item list using the indicating data.
- 20) The method of claim 19, wherein the method includes, in the computer system, and in response to dissociation, providing the product item list to the user.
- 21) The method of claim 17, wherein the method includes, in the computer system:
  - 10 (a) receiving user identity data indicative of an identity of the user;
  - (b) determining, using the indicating data, sensing device identity data indicative of the identity of the sensing device; and,
  - (c) using the sensing device identity data and the user identity data to associate the sensing device with the user.
- 15 22) The method of claim 17, wherein the user is provided with an identity card, the identity card having disposed thereon or therein coded data having a plurality of card coded data portions, each card coded data portion being indicative of an identity of the user, and wherein method includes, in the computer device:
  - 20 (a) receiving indicating data generated by the sensing device in response to sensing at least one card coded data portion, the indicating data being indicative of an identity of the user and the identity of the sensing device;
  - (b) generating, using the received indicating data, user data; and,
  - (c) associating, using the user data, the user and the sensing device.
- 23) The method of claim 17, wherein the method includes, in the computer system:
  - 25 (a) determining, using the received indicating data, product information; and,
  - (b) transferring the product information to the sensing device, the sensing device being responsive to the product information to display the product information to the user.
- 24) The method of claim 17, wherein each coded data portion is indicative of a respective position, and wherein the method includes, in the computer system:
  - 30 (a) receiving indicating data generated by the sensing device in response to sensing at least one coded data portion, the indicating data being indicative of at least one of:
    - (i) a position of the sensed coded data portion on the interface surface; and,
    - (ii) a position of the sensing device relative to the interface surface.
  - (b) generating, using the received indicating data:
    - 35 (i) position data indicative of at least one of:
      - (1) a position of the sensed coded data;

- (2) a position of the sensing device relative to the interface surface;
  - (3) an orientation of the sensed coded data; and,
  - (4) an orientation of the sensing device relative to the interface surface.
- (ii) identity data indicative of the identity of the product item;
- 5 (c) determining, using the identity data and the position data, the interaction; and,
- (d) facilitating the determined interaction.
- 25) The method of claim 17, wherein the interface surface includes at least one region, including coded data indicative of an identity of the at least one region, and wherein the method includes, in the computer system:
- 10 (a) receiving indicating data generated by the sensing device in response to sensing at least one card coded data portion, the indicating data being indicative of the identity of the at least one region;
- (b) generating, using the received indicating data, region identity data indicative of the identity of the at least one region;
- 15 (c) determining, using the region identity data, an interaction; and,
- (d) causing, using the interaction, provision of the assistance.
- 26) The method of claim 25, wherein the at least one region represents a user interactive element.
- 27) The method of claim 17, wherein the method includes, in the computer device:
- (a) selecting an interaction mode; and,
- 20 (b) performing the interaction in accordance with the selected interaction mode.
- 28) The method of any one of claim 1 and claim 17, wherein the sensing device includes a user interface for displaying information to the user, and wherein the display device includes at least one of:
- (a) a visual interface;
- 25 (b) an audio interface; and
- (c) a tactile interface.
- 29) The method of any one of claim 1 and claim 17, wherein the interaction includes displaying information relating to any one of the product's:
- (a) cost;
- 30 (b) contents;
- (c) weight;
- (d) place of origin;
- (e) manufacturer;
- (f) date of manufacture;
- 35 (g) date of packaging;
- (h) use-by date;

- (i) current owner; and
  - (j) dimensions.
- 30) The method of any one of claim 1 and claim 17, wherein the interaction includes at least one of:
- (a) providing product information about the product item to the user;
  - 5 (b) recording a purchase transaction indicating that the user has purchased the product item;
  - (c) recording a potential purchase transaction indicating that the user wishes to purchase the product item;
  - (d) providing comparison information to the user, the comparison information comparing product information about the product item with product information about another product
  - 10 item;
  - (e) playing a game associated with the product item; and
  - (f) conducting a competition in relation to the product item.
- 31) The method of any one of claim 1 and claim 17, wherein the coded data is indicative of an EPC associated with the product item.
- 15 32) The method of any one of claim 1 and claim 17, wherein the coded data distinguishes the product item from every other product item.
- 33) The method of any one of claim 1 and claim 17, wherein the coded data is redundantly encoded.
- 34) The method of any one of claim 1 and claim 17, wherein the coded data is redundantly encoded using Reed-Solomon encoding.
- 20 35) The method of any one of claim 1 and claim 17, wherein the coded data is substantially invisible to the unaided eye.
- 36) The method of any one of claim 1 and claim 17, wherein the coded data is printed using infrared ink.
- 37) The method of any one of claim 1 and claim 17, wherein the coded data is provided on the
- 25 interface surface coincident with visible markings representing at least one of:
- (a) product information;
  - (b) the identity of the product item; and,
  - (c) an interaction request.
- 38) The method of any one of claim 1 and claim 17, wherein the interface surface is at least a
- 30 portion of at least one of:
- (a) product item packaging;
  - (b) product item labelling;
  - (c) product manuals;
  - (d) product instructions; and,
  - 35 (e) a surface of the product item.

39) The method of any one of claim 1 and claim 17, wherein the coded data is disposed over at least one of:

(a) substantially all of any one of:

- (i) an entire product surface;
- 5 (ii) packaging; and,
- (iii) a product label;

(b) more than 25% of any one of:

- (i) an entire product surface;
- 10 (ii) packaging; and,
- (iii) a product label;

(c) more than 50% of any one of:

- (i) an entire product surface;
- (ii) packaging; and,
- (iii) a product label;

15 (d) more than 75% of any one of:

- (i) an entire product surface;
- (ii) packaging; and,
- (iii) a product label;

20